

Name.....

Index No.....

School.....

Signature.....

Date.....

**231/1**  
**BIOLOGY**  
**PAPER 1**  
**July/August 2010**  
**2 hrs**

**MANGA DISTRICT JOINT EVALUATION TEST – 2010**  
*Kenya Certificate of Secondary Education (K.C.S.E)*

**231/1**  
**BIOLOGY**  
**PAPER 1**  
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**INSTRUCTIONS**

Answer ALL the Questions in this paper in the spaces provided.

**FOR EXAMINER'S USE ONLY**

<b>QUESTIONS</b>	<b>MAXIMUM SCORE</b>	<b>CANDIDATES SCORE</b>
<b>1 -33</b>	<b>80</b>	

*This paper consists of 8 printed pages. Candidates should check carefully to ascertain that all the pages are printed as indicated and no questions are missing.*

1. Name the type of skeleton in:

i) Grasshopper (1mk)

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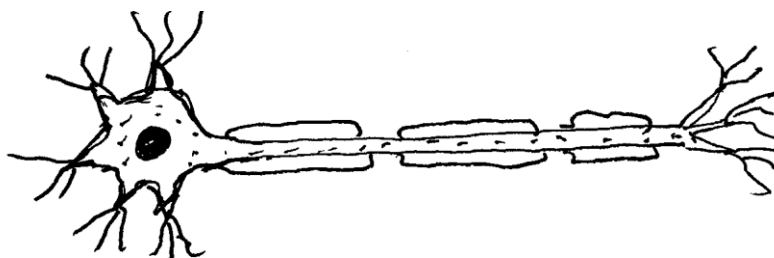
ii) Sheep (1mk)

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2. Explain why herbaceous plants droop in hot dry weather while woody plants remain erect in similar (2mks)

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3. Below is a diagram of the structure of a neurone.



a) With a reason identify the type of neurone. (2mks)

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b) What is the role of the neuron named above. (1mk)

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4. State three functions of auxins in the growth of plants. (3mks)

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5. Name the two main types of mutations. (2mks)

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6. Why is Larmack's theory on the mechanism of evolution scientifically unacceptable? (2mks)

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7. Explain the characteristics of a cell at anaphase of mitosis. (3mks)

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8. Name a method that could be used to estimate the population of:

i) Black jack in a garden (1mk)

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ii) Fish in a pond (1mk)

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9. State three characteristics of the environment in which plants called mesophytes grow (3mks)

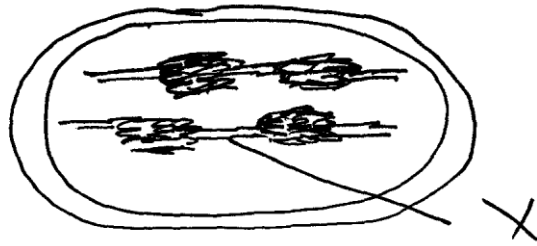
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10. Name two common liver diseases. (2mks)

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11. It. State a role of each of the following parts of the skin. (1mk)
- i) Sebaceous glands (1mk)
- .....
- .....
- ii) Erector pili muscles (1mk)
- .....
- .....
- iii) Subcutaneous fat layer. (1mk)
- .....
- .....
12. State three adaptations of phloem to its function. (3mks)
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13. Explain why enzyme pepsin is secreted as pepsinogen in the stomach. (2rnks)
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14. An animal has no incisors, no canines, 6 premolars and 6 molars in its upper jaw, in the lower jaw there are 6 incisors, 2 canines, 6 premolars and 6 molars.
- i) Write the dental formula of the animal. (1mk)
- .....
- .....
- ii) Calculate the total number of teeth for the animal. (1mk)
- .....
- .....
- .....
- iii) What is the likely food of the animal. (1mk)
- .....
- .....

15. Below is the structure of an organelle found in a plant (1mk)



i) Name the organelle. (1mk)

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ii) State the functions of the organelle named above. (1mk)

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iii) Name the part labeled X. (1mk)

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16. Name two mineral elements required in the synthesis of chlorophyll. (2mks)

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17. State three reasons why you would prefer the use of an electron Microscope rather than the light microscope. (3mks)

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18. The scientific name of the domestic cat is *Felis catus*. Classify the cat into:

i) Kingdom (1mk)

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ii) Genus (1mk)

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iii) Species (1mk)

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19. State three secondary sexual characteristics brought about by hormone testosterone. (3mks)

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20. State two characteristics in flowers that may hinder self - pollination in plants. (2mks)

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21. Name a sex-linked trait in man associated with:

i) Y – chromosome (2mks)

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ii) X – chromosome (1mks)

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22. State three applications of Genetics. (3mks)

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23. State three reasons why biomass decreases as you. move from a lower to a higher tropic level. (3mks)

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24. Of what advantages is metamorphosis to the life of insects? (2mks)

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25. Below is a diagram of a plant response.



i) Name the plant response illustrated above. (1mk)

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ii) State the importance of the named above response to the plant. (1mk)

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26. State two functions of the cerebrum of the brain, (2mks)

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27. What do you understand by the following parts of the eye:

i) Yellow spot. (1mk)

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ii) Blind spot (1mk)

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28. State three effects of releasing untreated sewage into a river. (3mks)

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29. State three advantages of breathing through the nose than through the mouth. (3mks)

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30. Define wilting and explain its importance to the plant. (3mks).

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31. State three industrial applications of anaerobic respiration. (3mks)

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32. State three methods of excretion in plants. (3mks)

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